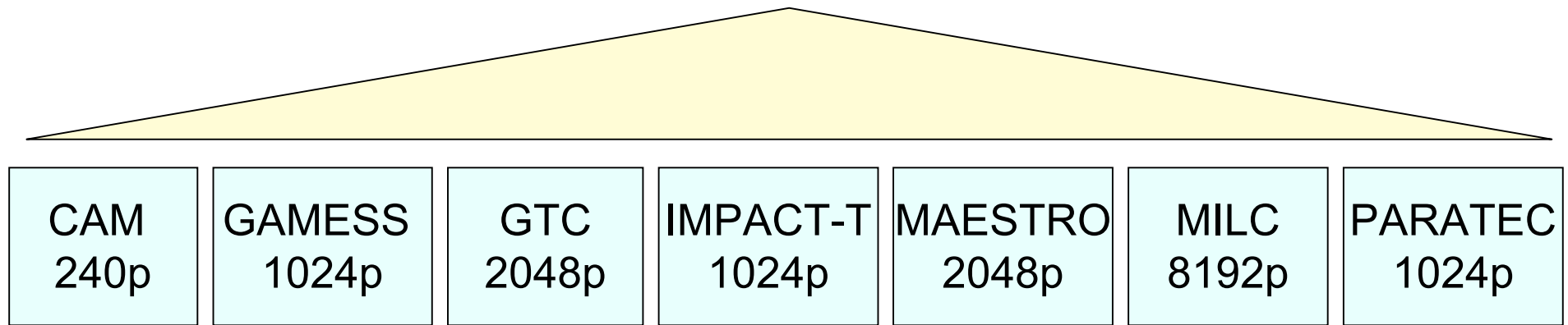




N6 Composite SSP Metric

The largest concurrency run of each full application benchmark is used to calculate the composite SSP metric

N6 SSP



For each benchmark measure

- *FLOP counts on a reference system*
- *Wall clock run time on various systems*

Example of N6 SSP on Hypothetical System

Hypothetical N6 System			Results	
	Tasks	System Gflopcnt	Time	Rate per Core
CAM	240	57,669	408	0.589
GAMESS	1024	1,655,871	2811	0.575
GTC	2048	3,639,479	1493	1.190
IMPACT-T	1024	416,200	652	0.623
MAESTRO	2048	1,122,394	2570	0.213
MILC	8192	7,337,756	1269	0.706
PARATEC	1024	1,206,376	540	2.182
GEOMETRIC MEAN				0.7

Rate Per Core =
Ref. Gflop count /
(Tasks*Time)

Flop count
measured
on reference
system

Measured wall
clock time on
hypothetical
system

Geometric
mean of
'Rates per
Core'

SSP (TF) = Geo mean of rates per core * # cores in system/1000

N6 SSP of 100,000 core system = 0.7 * 100,000 /1000 = 70

N6 SSP of 200,000 core system = 0.7 * 200,000 /1000 = 140

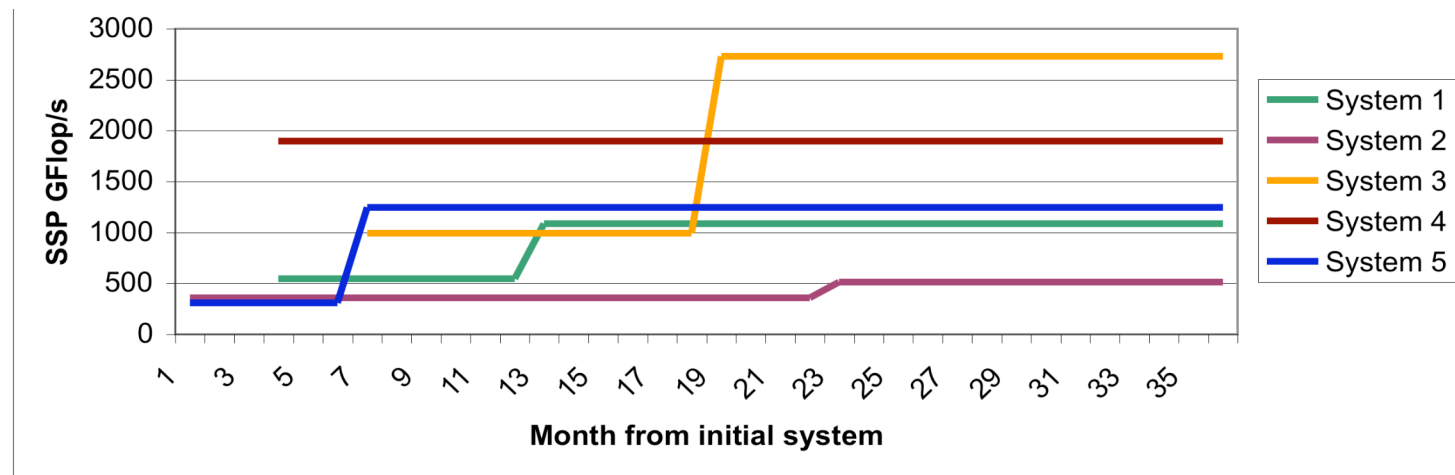
*Allows vendors to size systems based on
benchmark performance*



SSP Over Time

- Measures mean flop rate of applications integrated over time period
- SSP can change due to
 - System upgrades
 - Increasing # of cores
- Possible to evaluate systems delivered in phases
- Takes into account deliver date
- Produces metrics such as SSP/Watt and SSP/\$

SSP Over 3 Year Period for 5 Hypothetical Systems



Area under curve is system 'value'